^{238}U(^{12}C,Fγ) 2006Ve04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	N. Nica and B. Singh	NDS 181, 1 (2022)	9-Mar-2022

2006Ve04: E=90 MeV; measured Eγ, Iγ, γγ using Euroball 3 spectrometer containing 15 cluster Ge detectors, 26 clover Ge detectors, and 30 tapered single crystal Ge detectors. No Iγ′s and ΔEγ′s are reported.

^{147}Ce Levels

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
0.0	(5/2⁻)	732.8#	(17/2⁺)	1741.8@	(23/2⁻)	2773&	
117.0	(7/2⁻)	1123.8#	(21/2⁺)	2190@	(27/2⁻)	2871#	(33/2⁺)
400.1	(9/2⁺)	1364.8@	(19/2⁻)	2212#	(29/2⁺)	3355@	(35/2⁻)
482.1#	(13/2⁺)	1624.2#	(25/2⁺)	2698@	(31/2⁻)	3467&	

† From least-squares fit to Eγ′s. As no uncertainties are available for the Eγ input, the E(level) values are calculated with the assumption that the uncertainties are the same (of 1 keV) for all the Eγ′s.

‡ Assigned by 2006Ve04 based on the assumptions that in the yrast decays, spin values increase with excitation energy, and by analogy with level structure of well-known neighboring isotones.

Band(A): Band 1, yrast band based on $\nu i_{13/2}$ orbital (2006Ve04).

@ Band(B): Cascade 5, possible octupole band based on $\nu i_{13/2}\otimes 3^-$ (2006Ve04). 2190 level and 566γ are common with those in ^{252}Cf SF decay (1999Sa58), while all the other levels and γ′s are different.

& Band(C): Cascade 6.

γ(^{147}Ce)

Eγ	Ei(level)	J_i^π	E_f	J_f^π	Eγ	Ei(level)	J_i^π	E_f	J_f^π
82.0	482.1	(13/2⁺)	400.1	(9/2⁺)	561	2773		2212	(29/2⁺)
117.0	117.0	(7/2⁻)	0.0	(5/2⁻)	566	2190	(27/2⁻)	1624.2	(25/2⁺)
250.7	732.8	(17/2⁺)	482.1	(13/2⁺)	587.8	2212	(29/2⁺)	1624.2	(25/2⁺)
283.1	400.1	(9/2⁺)	117.0	(7/2⁻)	595.2	3467		2871	(33/2⁺)
391.0	1123.8	(21/2⁺)	732.8	(17/2⁺)	618	1741.8	(23/2⁻)	1123.8	(21/2⁺)
484	3355	(35/2⁻)	2871	(33/2⁺)	632	1364.8	(19/2⁻)	732.8	(17/2⁺)
486	2698	(31/2⁻)	2212	(29/2⁺)	659.4	2871	(33/2⁺)	2212	(29/2⁺)
500.4	1624.2	(25/2⁺)	1123.8	(21/2⁺)					

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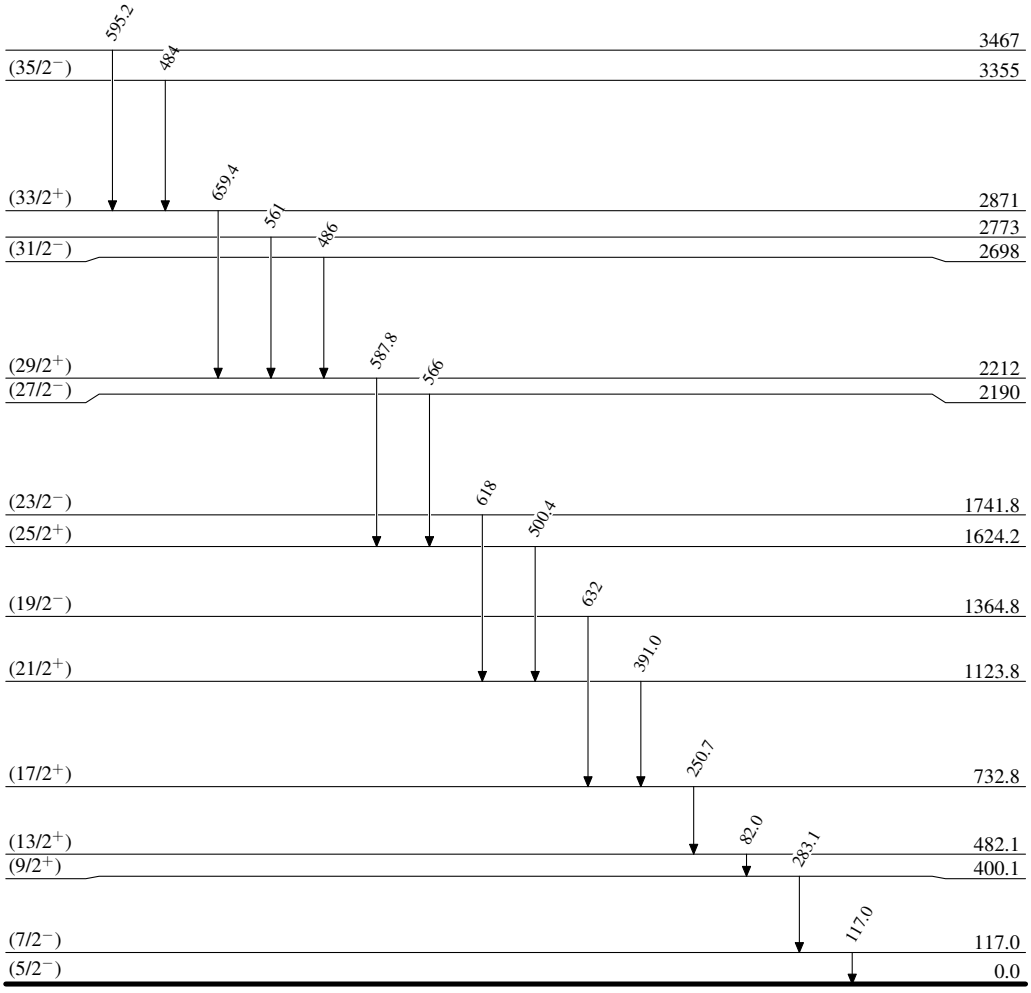
Level Scheme



$^{147}_{58}Ce_{89}$

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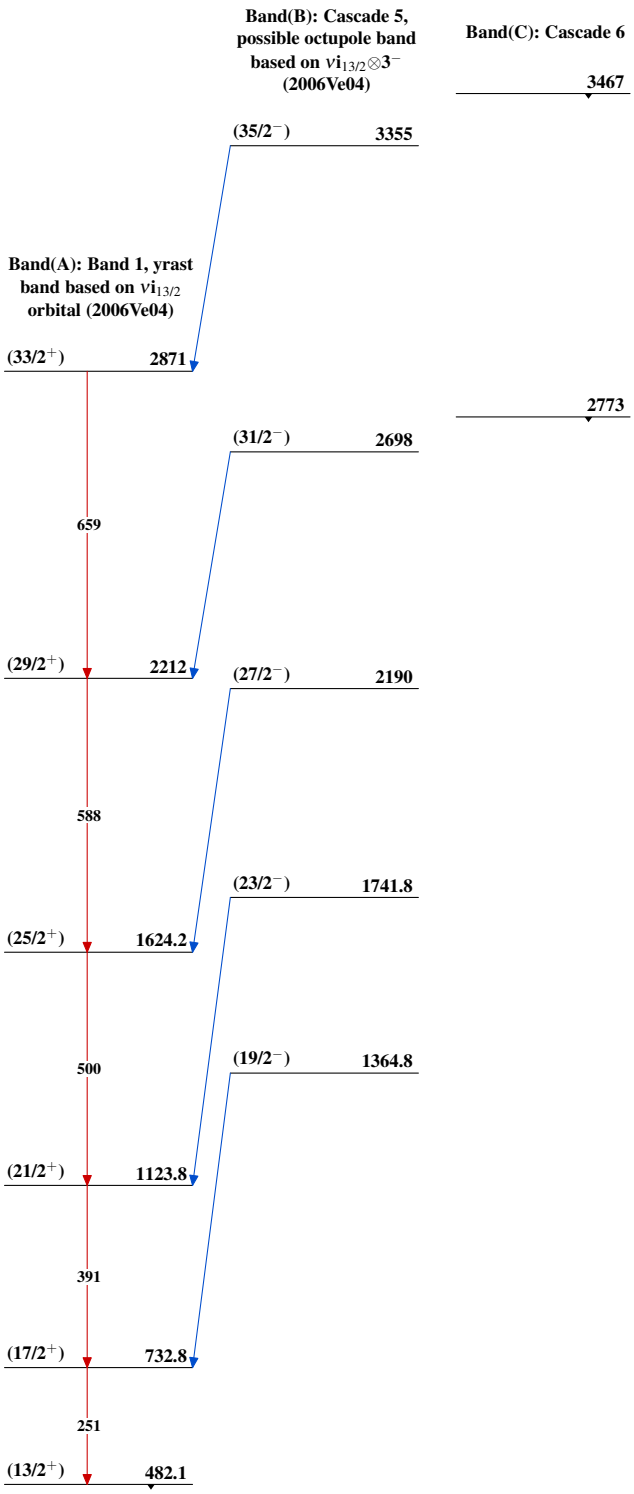

$^{147}_{58}Ce_{89}$